



Streetlight Conversion Project Brentwood, TN



March 4, 2021



Who is PATH?

- Founded in 2017
- Offices in Nashville, Memphis, and Jackson, MS
- Full-service Energy Services Company (ESCO)
- Most experienced firm in the TVA service area as it relates to streetlight conversion projects

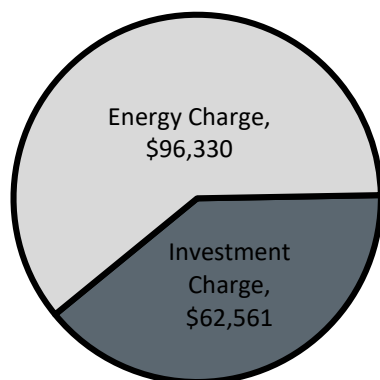


Goodlettsville/NES

- September 2019
 - Goodlettsville formally engages with PATH
 - PATH and NES leadership begin conversations
- January 2020
 - PATH and NES work to develop model that maximizes benefits for both Goodlettsville and NES
- September 2020
 - PATH begins physical audit and new streetlight design
- December 2020
 - Final project approval
- February 2021
 - Installation begins

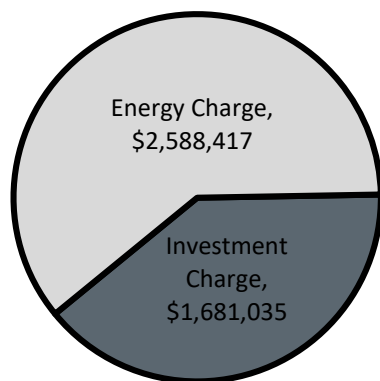
Current Annual NES Streetlight Bill

Annual Total
\$158,891



20 Years of NES Streetlight Expenses Under Current Plan

20 Year Total
\$4,269,452

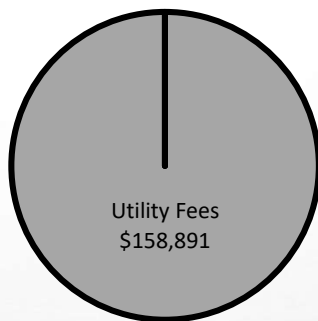


Existing NES Streetlight Summary

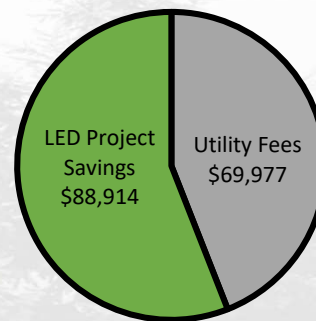
- » Currently lease 1,124 streetlights through NES
- » Annual Streetlight Bill is \$158,891
- » 20 Year Streetlight Forecast is \$4,269,452

Annual Streetlight Expense

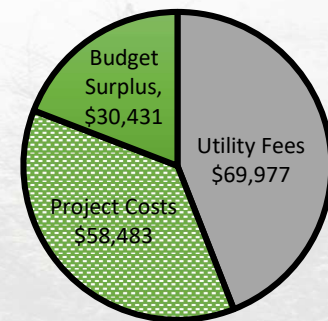
Pre-Project



Savings Opportunity

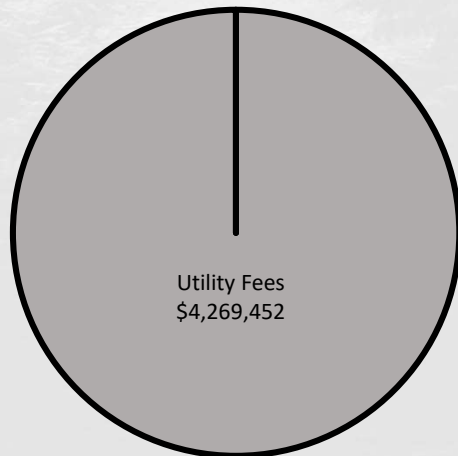


Budget Impact

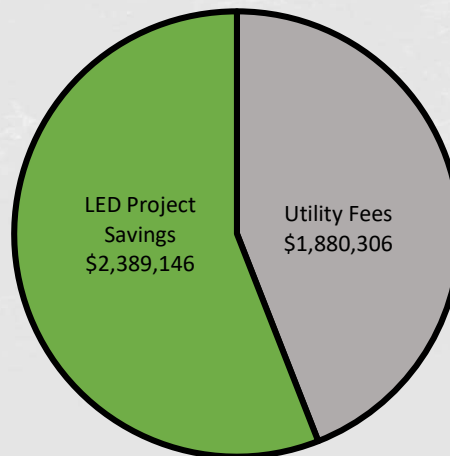


20 Year Streetlight Expense

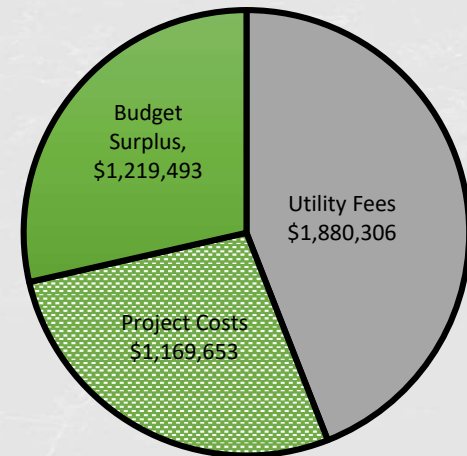
Pre-Project



Savings Opportunity

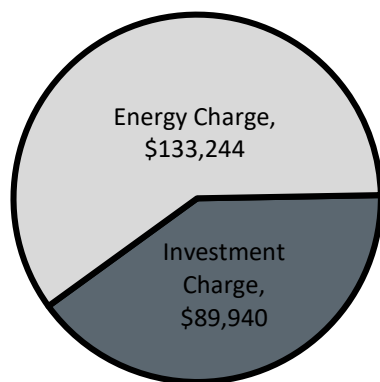


Budget Impact



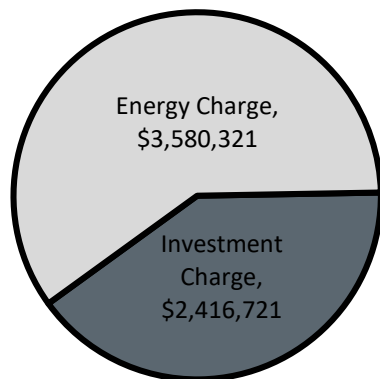
Current Annual NES Streetlight Bill

Annual Total
\$223,184



20 Years of NES Streetlight Expenses Under Current Plan

20 Year Total
\$5,997,042

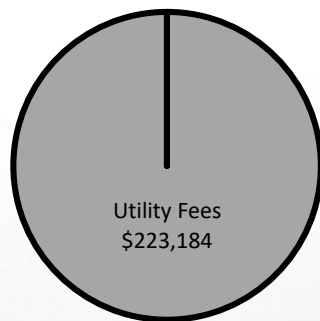


Existing NES Streetlight Summary

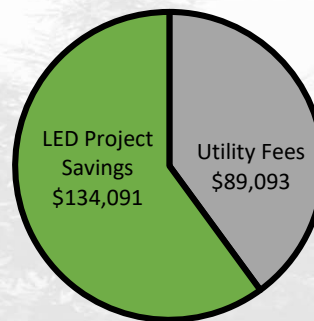
- » Currently lease 1,975 streetlights through NES
- » Annual Streetlight Bill is \$223,184
- » 20 Year Streetlight Forecast is \$5,997,042

Annual Streetlight Expense

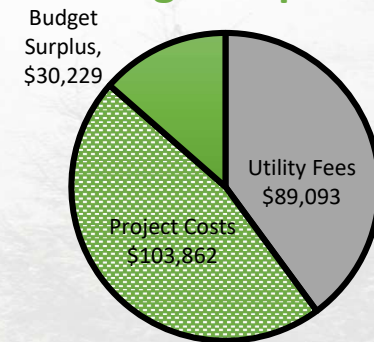
Pre-Project



Savings Opportunity

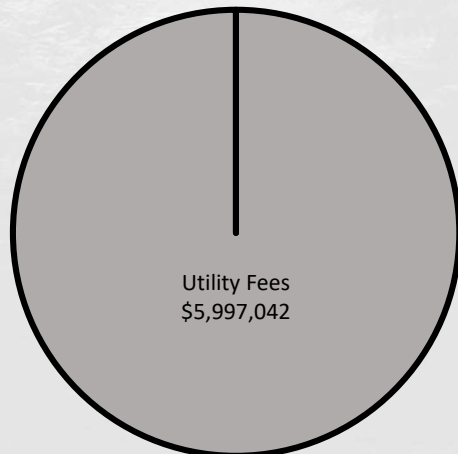


Budget Impact

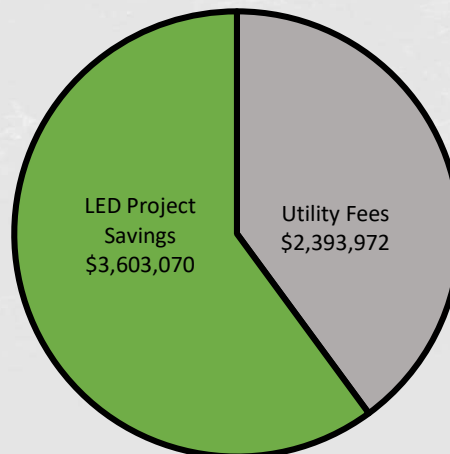


20 Year Streetlight Expense

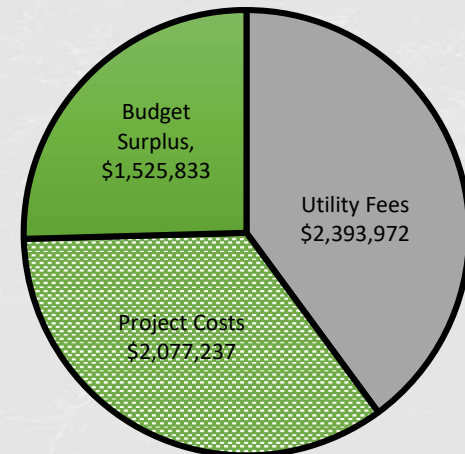
Pre-Project



Savings Opportunity



Budget Impact



This city-wide streetlight conversion project will result in a total energy reduction of 1,098,391 kilowatt-hours of electricity.

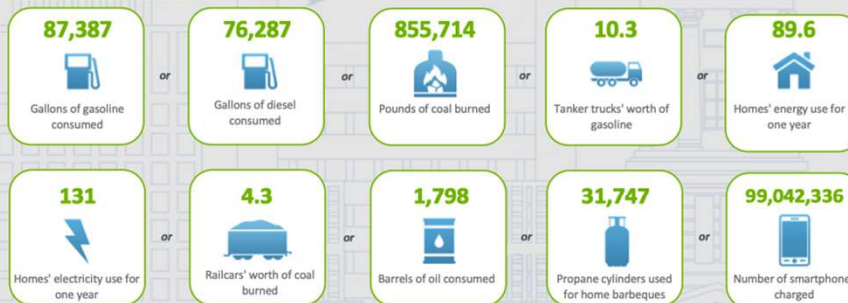
Equivalent to:

Greenhouse gas emissions from



STREETLIGHT PROGRAM BY THE NUMBERS

CO₂ emissions from



Greenhouse gas emissions avoided by



Carbon sequestered by



Source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



Project Costs

NES Streetlight Conversion - Budget Breakdown	
	<u>Current Estimates</u>
Number of Fixtures	1,975
IGA Fee	\$50,000
Buyout of Existing Streetlight Plant Account	\$281,600
Total Cost of Conversion Project (Buyout and IGA Fee included)	\$1,783,167
Current Streetlight Bill	\$223,184
Future Streetlight Bill	\$83,168
Annual Maintenance Allowance	\$5,925
Gross Annual Savings (after estimated maintenance budget allowance)	\$134,091
Simple Payback	13.3 years
Current 20-yr Streetlight Budget Forecast*	\$5,997,042
Future 20-yr Streetlight Budget Forecast*	\$2,393,972
Gross 20-yr Savings (after estimated maintenance budget allowances)	\$3,603,070

*Based on historical averages, this assumes 3% inflation on both the energy and investment charge portions of the bill

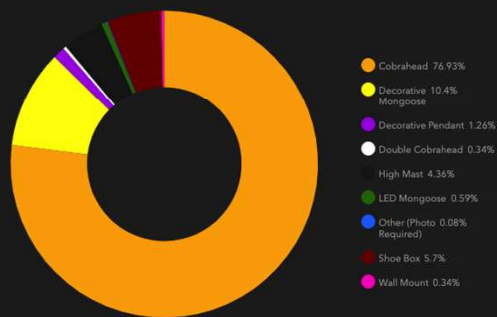
1,192
Lights Audited

Last update: a minute ago

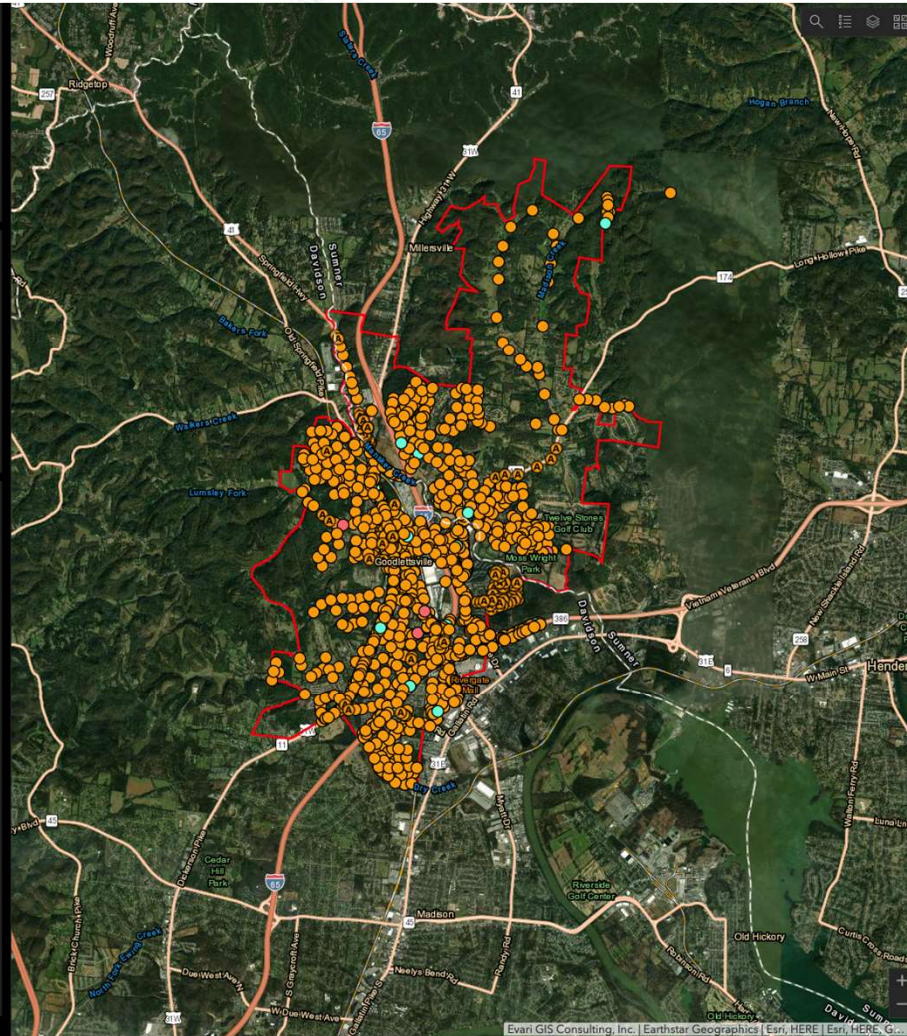
0
Lights Remaining

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Fixture Model Breakdown:



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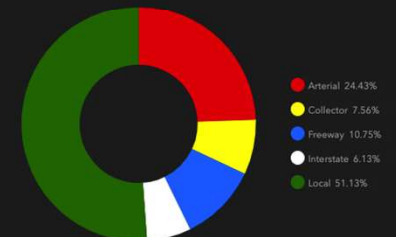
Evan GIS Consulting, Inc. | Earthstar Geographics | Esri, HERE | Esri, HERE, G...

Audit Issues:

- 143: No Light Here
- 165: No Light Here
- 196: No Light Here
- 198: No Light Here
- 242: No Light Here
- 413: No Light Here
- 527: No Light Here
- 573: No Light Here
- 656: Flagged For Review
- 676: No Light Here
- 693: Flagged For Review

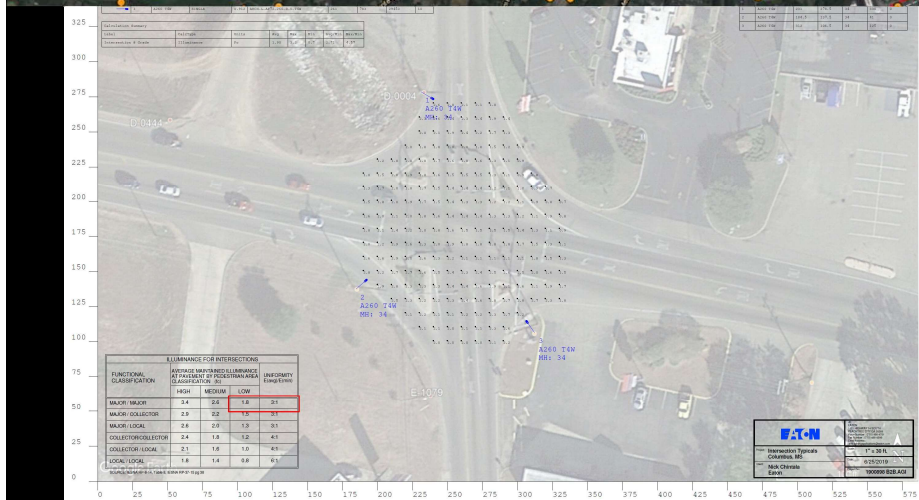
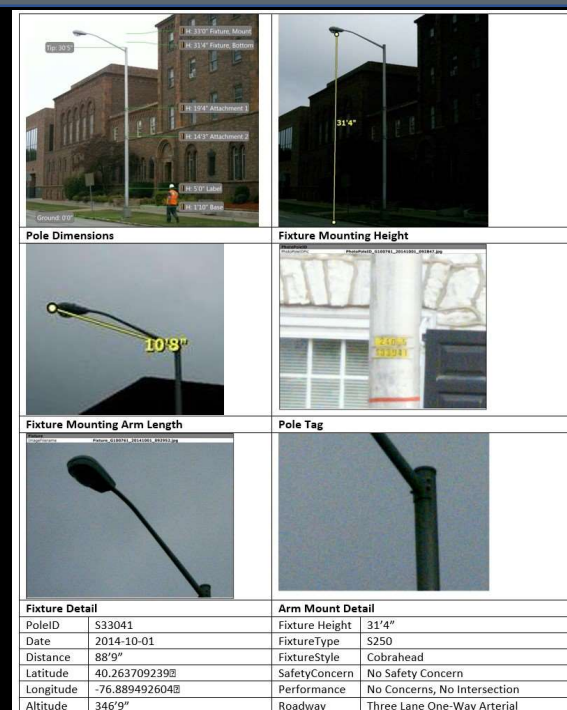
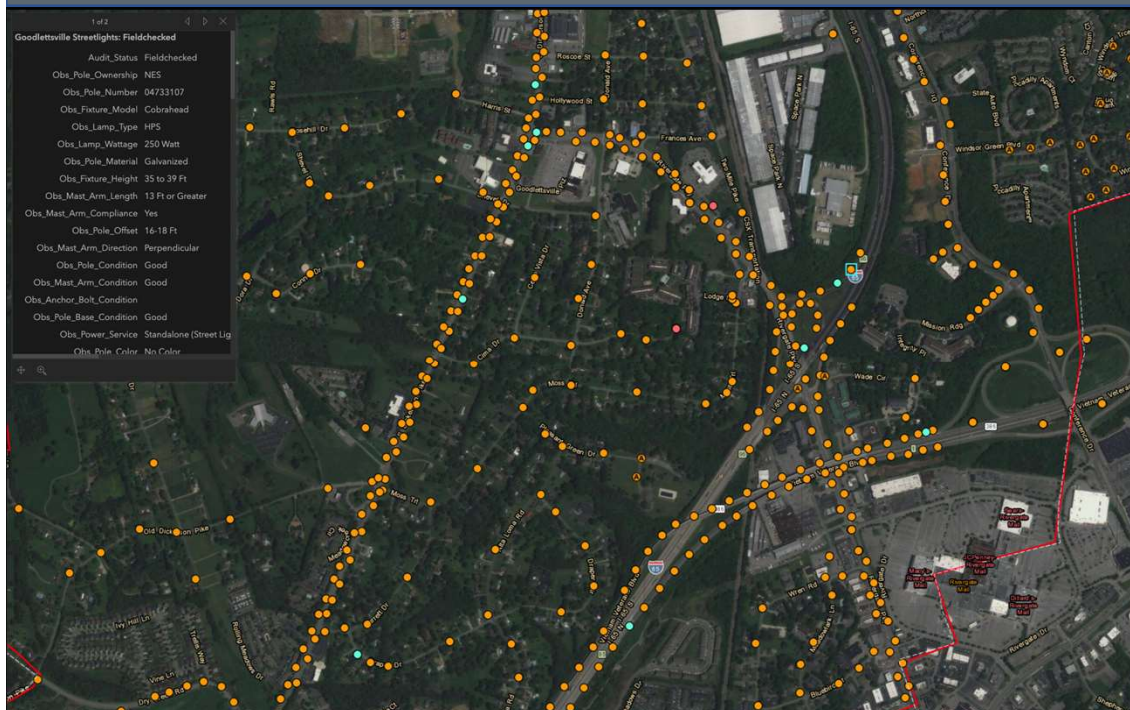
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Road Classification Breakdown:



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Investment Grade Audit (IGA)





1. Professional Development Agreement (PDA) approved and signed
2. PATH performs Investment Grade Audit (4-6 months)
 - Includes Utility Negotiations with both NES and MTE, physical streetlight audit of existing system, and complete design of new system
3. Final proposal presented and Commission votes to approve project (Post-Audit)

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